

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Original) An organic photovoltaic conversion device comprising:
a matrix material;
carbon nanotubes dispersed in the matrix material; and
photovoltaic organic molecules attached to defect sites on the carbon nanotubes.
2. (Original) The device of claim 1, wherein the photovoltaic organic molecules are adapted to generate a photocurrent upon absorbing radiation.
3. (Previously Presented) The device of claim 1, wherein the photovoltaic organic molecules are chemisorbed to the defect sites on the carbon nanotubes such that absorbed radiation provides excitation transfer from the photovoltaic organic molecules to the carbon nanotubes.
4. (Previously Presented) The device of claim 1, wherein the photovoltaic organic molecules comprise organic dye molecules.
5. (Previously Presented) The device of claim 1, wherein the device comprises a solar cell.
6. (Withdrawn) The device of claim 1, wherein the device comprises a photodetector.
7. (Previously Presented) The device of claim 1, wherein the defect sites on the carbon nanotubes comprise a carboxyl group or a C₁₋₆ alkyl group.
8. (Withdrawn) The device of claim 7, wherein the C₁₋₆ alkyl group comprises a sec-butyl group.

9. (Previously Presented) The device of claim 1, wherein:
the matrix material comprises a polymer matrix material; and
the carbon nanotubes are well dispersed in the polymer matrix material.

10. (Original) The device of claim 9, wherein the polymer matrix material is selected from a group consisting of polyamide, polyester, polyurethane, polysulfonamide, polycarbonate, polyurea, polyphosphonamide, polyarylate, polyimide, poly(amic ester), poly(ester amide), a poly(enaryloxynitrile) matrix or mixtures thereof.

11. (Previously Presented) The device of claim 4, wherein the organic dye comprises a phenazine dye.

12. (Currently Amended) The device of claim 11, wherein the dye comprises phenosafranin (PSF).

13. (Withdrawn) The device of claim 5, wherein the organic dye is selected from a group consisting of one or more of azo dyes, phthalocyanine dyes, quinine dyes, quinoline dyes, porphyrine dyes, pyrylium dyes and perylene dyes.

14. (Previously Presented) The device of claim 5, further comprising at least one of a p and n type charge transporting layers in contact with the matrix material.

15. (Original) The device of claim 14, wherein the charge transporting layers are selected from a group consisting of hydrazone compounds, benzidine compounds and styryl compounds.

16. (Previously Presented) The device of claim 1, further comprising different types of photovoltaic organic molecules attached to the carbon nanotubes, wherein the different types of photovoltaic organic molecules have a peak sensitivity to different radiation wavelengths.

17. (Previously Presented) The device of claim 5, further comprising two electrodes.

18. (Previously Presented) The device of claim 17, wherein at least one of the two electrodes is transparent to radiation.

19. (Withdrawn) The device of claim 5, wherein the solar cell comprises a Schottky type cell comprising a single charge generating layer comprising the matrix material layer containing one type of organic photovoltaic molecule.

20. (Original) The device of claim 5, wherein the solar cell comprises a bilayer cell containing a heterojunction of two charge generating layers each containing a different type of organic photovoltaic molecule.

21. (Previously Presented) The device of claim 1, wherein:
the matrix material comprises a flexible thin film or a flexible thread that is formed on a substrate; and
an overall stiffness of the device is determined by a stiffness of the substrate.

22. (Previously Presented) The device of claim 1, wherein the carbon nanotubes are aligned in a controlled manner in the matrix material.

23. (Previously Presented) The device of claim 1, wherein the matrix material is formed on an outer surface of a space suit or a space ship.

24. – 42. (Canceled)

43. (Previously Presented) The device of claim 1, wherein the defect sites are located along the carbon nanotube bodies.

44. (Previously Presented) A device comprising:
a matrix material;
carbon nanotubes dispersed in the matrix material; and
photovoltaic organic molecules attached to defect sites along the carbon nanotube bodies.

45. (Previously Presented) The device of claim 44, wherein the matrix material, the carbon nanotubes, and the photovoltaic organic molecules are part of a solar cell.

46. (New) A solar cell comprising:
a matrix material;
a plurality of carbon nanotubes dispersed in the matrix material; and
photovoltaic organic molecules attached to defects along the carbon nanotube bodies,
wherein the defects are acid treatment induced or anionic treatment induced.